



# Maha OUALI

## PERSONAL PROFILE

A curious engineering student with a strong background in mathematics and programming. I am looking for an opportunity as a Data Scientist.

## CONTACT

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- https://github.com/Mahaspace

## LANGUAGES

- Arabic : Native
- English : C2
- French : C2
- Spanish : A2

## HARD SKILLS

- **PROGRAMMING LANGUAGES**  
Python, R, SQL, C,C++, Matlab, Julia(CPLEX, Gurobi)
- **DATA ANALYSIS AND PROCESSING**  
Pandas, Numpy, Scikit-Learn, Keras, Tensorflow, PyTorch,
- **BAYESIAN OPTIMIZATION**  
Trieste, gpfLOW, Scipy
- **DATA VISUALISATION AND BIG DATA**  
matplotlib, seaborn, ggplot2, Grafana
- **DATA EXTRACTION**  
Teradata, Teradata Vantage, ETL Processes, SQL Queries, Pyspark
- **VERSION CONTROL**  
Git, Github, Gitlab, Bitbucket
- **CONTAINERIZATION:**  
Docker

## INTERESTS

- Problem solving : IEEEExtreme programming competition,
- Technology : Tunisia Entrepreneurship Summit
- Physics
- Literature, art and cinema

## EXTRACURRICULAR ACTIVITIES

- Active member at IAESTE Tunisia : intern affairs responsible and visa responsible
- Active member at IEEE student branch : Participated in different summits and various innovative projects



## EDUCATION

### MS Data Science

Institut Polytechnique de Paris, France Since September 2022

Relevant Coursework : Machine Learning, Deep Learning, Reinforcement Learning, Computer vision, Natural Language Processing, Statistics, Data Visualization...

### Engineering Degree in Applied Mathematics

ENSTA Paris, Since September 2020

Relevant Coursework : Optimization, Operational Research, Statistics, Probability, Scientific computing, Time series, Bayesian Filtering, Automatic control

### Pre-Engineering Degree

IPEST, Tunisie, September 2018 - july 2020

Relevant Coursework : Mathematics, Physics, Computer Science, Chemistry

### High School Scientific Diploma in Mathematics With High Honors

Pioneer High school of Bizerte, Tunisie September 2014 - june 2018

Succeeded the Baccalaureate exam with high honors. Average grade : 17,30

## PROFESSIONAL EXPERIENCE

### Data Science Intern, Air France KLM April 2023 - October 2023

- Engineering fraud detection for Air France, collaborating with Revenue Integrity and Data Science teams.
- Leading data exploration, optimized pipelines with Teradata
- Applying advanced ML algorithms for detection, and delivering actionable to stakeholders for fraud prevention strategies.

Skills : Python, SQL, Pyspark, Terdata, Terdata Vantage, Agile methodologies

### Research intern, inria Sophia Antipolis June 2022 - August 2022

- Collaborated with SecondMind(https://www.secondmind.ai/), on a research internship focused on extending the efficient global optimization method to multifidelity optimization of costly functions.
- Developed innovative approaches for optimizing expensive functions with varying fidelity levels, enhancing efficiency and effectiveness.

Skills : Python, Gpflow, Trieste, Scipy

### Introductory internship : STAM Tunisie July 2021 - August 2021

- Assisted in documenting meetings and site visits, gaining insights into the industrial world and understanding company operations.

## ACADEMIC PROJECTS

### Capstone Data Science Project with Capgemini 2023

- Contributed to the "foncier innovant" project by Capgemini, focused on detecting unauthorized residential constructions through skylight identification using computer vision AI models.
- Trained state-of-the-art models on annotated datasets to achieve accurate and reliable detection results.

### X-DataScience Data camp 2023

- Learning all aspects of completing a data science pipeline from exploratory data analysis (EDA), feature engineering, parameter optimization to advanced learning algorithms.
- Participating in a competitive challenge using RAMP website. The goal is to detect Interplanetary Coronal Mass Ejections (ICMEs) in the data measured by in-situ spacecraft. Mixed log-loss/f1 score = 0.22
- Creating a ramp challenge for a large-scale multimodal product data classification using Rakuten Products dataset. (https://github.com/Mahaspace/Rakuten-France-Multimodal-Product-Data-Classification)

### Distributed Kernel Ridge Regression project 2023

- Implemented distributed computation methods for Kernel Ridge Regression, including decentralized gradient descent, gradient tracking, dual decomposition, and ADMM.
- Explored convergence, graph structure impact, and scalability of the algorithms. Documented results and findings.

## CERTIFICATES

- **Machine Learning** Stanford University, Coursera October 2022
- **Deep Learning with PyTorch : Siamese Network** Coursera Project Network October 2022
- **Mastering data analysis with Pandas** Coursera October 2022
- **Neural Network and deep learning** DeepLearning.AI, Coursera April 2022
- **Fundamentals of quantitative modeling** University of Pennsylvania, Coursera March 2022